

**REMARKS**

Claims 46-146 were pending at the time the present Office Action was mailed. By this amendment, claims 46 and 119 have been amended. Claims 46-146 remain pending in the present application.

The following is a summary of the Office Action and associated objections and rejections.

(A) Claims 50-54 were rejected under 35 U.S.C. § 103(a) for being unpatentable over French Patent No. 2629178 (Arribas) in view of UK Patent Application No. 2 334 328 (Shimek GB '328), UK Patent Application No. 2 068 106 (Rosiek) and UK Patent Application No. 2 035 545 (Palau).

(B) Claims 46-49, 55, 56, 59, 61-75, 79-92, 94-96, 98-104, 106-125, 128-135, and 139-146 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek, Palau and Arribas.

(C) Claims 60, 78, 93, 126, 127 and 136-138 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek, Palau and Arribas, and further in view of U.S. Patent No. 5,941,237 (Shimek et al.) or U.S. Patent No. 4,726,351 (Whittaker).

(D) Claims 57, 76, 77, and 105 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek, Palau and Arribas, and further in view of U.S. Patent No. 5,046,944 (Smith).

A. Rejection of Claims 50-54 under 35 U.S.C. § 103(a)

The Examiner rejected claims 50-54 under 35 U.S.C. § 103(a) as being unpatentable over Arribas, in view of Shimek GB '328, Rosiek, and Palau. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or

suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970). Further, "the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." MPEP § 2143. If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 50 is directed to a burner assembly having a non-metallic burner body with, *inter alia*, an upper portion with a contoured surface that simulates coal members and that has a substantially flat portion forming a simulated-log-support surface adjacent to the simulated coal members. The simulated-log-support surface on the upper portion has an alignment guide configured to align a simulated log relative to the upper portion of the burner body. The simulated log is supported on the burner body by the simulated-log-support surface adjacent to the simulated coal bed.

The four applied references can not support an obviousness rejection of the claims because the references taken alone or in combination do not teach or suggest each and every limitation recited in the claims. Applicants have previously analyzed in detail the teachings of the four references in the Amendment dated February 14, 2007. Applicants reiterate that analysis without repeating it. None of the references teach or suggest a burner assembly with all of the claimed features, including the substantially flat portion forming a simulated-log-support surface adjacent to simulated to coal members, the alignment guide configured to align a simulated log relative to the upper portion of the burner body. The only teaching of such a construction is provided by the present application.

In the Office Action the Examiner states:

"Applicant argues that **FR002629178 (ARRIBAS)** "does not provide a burner body having a substantially flat portion forming a simulated-log support surface adjacent to simulated coal members". The examiner does not disagree. Indeed, in this regard, it is the teachings of **GB002068106 (ROSIEK et al)** and **GB002035545 (PALAU)** which renders obvious applicant's claimed subject matter. That is, it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to construct the non-metallic ceramic burner body upper portion of **FR002629178 (ARRIBAS)** to include a flat lower portion or bottom surface, distribution apertures positioned in a plurality of planes and spacing, a peak and trough contoured profile, and/or materials that glow at selected color variations, in view of the teachings of **GB002068106 (ROSIEK et al)** and **GB002035545 (PALAU)**."

Accordingly, the Examiner acknowledges that the references fail to teach the burner body's claimed feature of the substantially flat portion forming a simulated-log-support surface adjacent to simulated to coal members. Even if, for the sake of argument, the four references could be combined, the Examiner asserts that the combination of references would provide a non-metallic ceramic burner body upper portion of **FR002629178 (ARRIBAS)** (which doesn't have the claimed simulated-log-support surface) and a flat bottom surface, distribution apertures positioned in a plurality of planes and spacing, a peak and trough contoured profile, and/or materials that glow at selected color variations. This resulting teaching of a burner body upon which the Examiner bases his rejection, however, still fails to teach each and every claimed limitation, namely the substantially flat portion forming a simulated-log support surface having an alignment guide configured to align the simulated log relative to the upper portion of the burner body. Because the references fail to teach or suggest each and every claimed limitation, the four references can not establish *prima facie* obviousness of a claimed invention. Therefore, claims 50-54 are patentable over the applied references and are in condition for allowance.

Claims 51-54 depend from claim 50. At least for the reasons discussed above, Applicants respectfully submit that these dependent claims are patentable over the cited references and are in condition for allowance.

B. Rejection of Claims 46-49, 55, 56, 58, 59, 61-75, 79-92, 94-96, 98-104, 106-125, 128-135, and 139-146 under 35 U.S.C. § 103(a)

The Examiner rejected claims 46-51, 55, 56, 58, 59, 61-75, 79-92, 94-96, 98-104, 106-125, 128-135 and 139-146 under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek, Palau, and Arribas. The four applied references can not support a prima facie obviousness rejection of the claims.

Claim 46 has been amended to clarify the claim. Claim 46 is directed to a burner assembly for a direct vent fireplace, and the burner assembly, inter alia, first and second sets of the gas distribution apertures extending the burner body. The first set of gas distribution apertures are selectively grouped together and configured with the first recessed gas distribution chamber portion to provide a first flow rate of fuel gas through the burner body for ignition and a first flame characteristic in the direct vent fireplace unit, and the second set of gas distribution apertures being selectively grouped together and configured with the second recessed gas distribution chamber portion to provide a second flow rate of fuel gas through the burner body for ignition and a second flame characteristic in the direct vent fireplace unit different from the first flame characteristic.

The four references taken alone or in combination do not teach or suggest the burner assembly as set forth in claim 46. As previously explained, Shimek GB '328 is directed to a dual-purpose indoor/outdoor portable gas burner that "may be used in a fireplace as a burner, or on a deck as a campfire or a grill and/or as a portable and storable campfire grill." Page 2, lines 2-5. See also page 2, lines 8-11. Shimek GB '328 specifically distinguishes its multi-function burner from prior art units because such prior art "units are not useable as a grill or as a gas burner system for a gas fireplace, thus, are single purpose fireplace units." Page 1, lines 24-26. Shimek GB '328 also teaches a multi-purpose burner configured to achieve consistent efficient burning with a desired flame pattern in a manner suitable for use as a grill or a stove cooking unit or a camp fire.

Shimek GB '328 provides no teaching of a burner assembly as claimed for a direct vent fireplace. Shimek GB '328 also fails to teach or suggest a burner body as claimed with a defined first set of gas distribution apertures selectively grouped together and configured with a first recessed gas distribution chamber portion to provide a first flow rate of fuel gas through the burner body for ignition and a first flame characteristic in the direct vent fireplace unit, and a defined second set of gas distribution apertures being selectively grouped together and configured with the second recessed gas distribution chamber portion to provide a second flow rate of fuel gas through the burner body for ignition and a second flame characteristic in the direct vent fireplace unit different from the first flame characteristic. The only teaching or suggestion of such a configuration is provided by the present invention.

The Examiner states in the Office Action that the apertures of Shimek GB '328 are differently distributed to the flow rate of fuel flowing through the first and second sets of apertures would necessarily be different and any flames produced by the first and second sets of apertures would necessarily be characteristically different from each other. The Examiner also repeated his assertion that "the H-shaped manifold (13; figure 9) shows the first set of apertures to be randomly positioned along the surface of their respective manifold H-shaped sections. It is further noted that the number of apertures in the first set is shown to be different from the number apertures of the second set. Because the apertures of the first set of apertures and the second set of apertures are differently distributed along the gas supply manifold and differ in number the flow rated of fuel flowing through respectively by the first set and second set of apertures would necessarily be different and any flame(s) produce by the first set of apertures would necessarily be characteristically different from any flames produced by the second set of apertures." Page 11; Office Action.

Applicants continue to disagree with the Examiner's interpretation and characterization of the reference for all of the reasons previously presented in Applicant's amendment dated February 14, 2007. In addition to Applicant's prior analysis, Applicants

notes that the Examiner is making assumptions and drawing conclusions about what is shown in the Figures of Shimek GB '328, not from text of Shimek GB '328's specification, but based upon the teachings from the present application. The text of Shimek GB '328's specification is simply silent and it does not support the Examiner's characterization of the references as to the arrangement and "necessary" flow rates and flame characteristics. The Examiner's rejection is clearly based on an improper utilization of the present application as a blue print for aperture arrangement, flow rate configuration and flame characteristics. Applicants submit that an objective reading of the reference in view of the claim as a whole, without the utilization of improper hindsight analysis, clearly show that the reference does not teach or suggest the burner assembly as claimed.

The Examiner correctly states in the Office Action that reconstruction based upon hindsight reasoning is proper so long as it take into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from Applicants' disclosure. The Examiner's construction of the references, however, does in fact include knowledge gleaned only from Applicants' disclosure, namely the importance of grouping the sets of apertures and configured with the claimed recessed gas distribution chamber portions to provide the fuel gas flow rates and the different flame characteristics in the direct vent fireplace unit as claimed to provide a variable fire with different flame characteristics to very closely simulate a natural wood-burning fire. Shimek GB '328 is silent regarding such knowledge. The other three cited references do not correct the deficiency of the primary reference. For example, Rosiek emphasizes that, for continuous uniformity of flames at least three gas/air mix feed bores must be provided in the minimum 7 mm space in between the supports for the coal or log elements. Modifying the teaching of these references to provide the claimed burner assembly would destroy the intended function of the burners to provide consistent flame characteristics. Accordingly, the cited references alone or in combination do not teach or suggest all the claim limitations of the claimed invention taken as a whole. Therefore, claims 46-49 are patentable over the cited references and are in condition for allowance.

Claims 55, 56, 58, 59, and 61-63 are also patentable over the combination of four references at least for the above reasons. Regarding claim 55, the burner assembly has a burner pan, a spacer, and a burner body having upper and lower portions. The lower portion of the burner body has edge portions separate from the spacer and spaced apart from the burner pan by the spacer forming an interior gas distribution chamber. None of the applied references teach such a burner assembly with a spacer as set forth in claim 55. Shimek GB '328 is silent with respect to such a configuration.

The Examiner states that Shimek GB '328 "clearly intends the silicone adhesive to not only connect or bond the burner sections but it is also intended as a means for "sealing." The Examiner then appears to assert on page 4 of the Office Action that the "bead" or line of adhesive is a spacer because the line of adhesive has a thickness. However, on page 6 of the Office Action, the Examiner states that Shimek GB '328 discloses "a spacer contacting and therefore adjacent to the base (not referenced; i.e.-the downward extending perimeter portion adhesively bonded (25) to the base (11, 11A) and forming the sealed recessed gas manifold area (13))." Yet, the Examiner continues and asserts that the same silicone adhesive of Shimek GB '328 is a gasket. This interpretation and application of Shimek GB '328 clearly demonstrates that the Examiner is using a piecemeal construction of the reference(s) based on the claimed features of the present invention and the benefit of impermissible hindsight analysis.

Nowhere does Shimek GB '328 teach or suggest a burner assembly with a burner body and a separate spacer. The downward perimeter portion to which the Examiner points is an integral, inseparable part of the "ceramic fiber top", and it is not a spacer that is separate from the top. Further, Shimek GB '328 does not teach or suggest that the line of adhesive is a spacer as claimed. As previously explained in detail in the February 14, 2007 Amendment, Shimek GB '328 refers to the adhesive in only three places and none of the three descriptions of the adhesive state or even suggest that the adhesive acts as a spacer that supports a lower portion of a burner body apart from a burner pan to form an interior gas distribution chamber between the burner pan and the burner body. While the

Examiner asserts that a bead of silicon adhesive can have a thickness so as to act as a spacer, the Shimek GB '328 simply provides no suggestion or motivation to modify the adhesive to have a sufficient thickness to act as a spacer as claimed. The mere fact that a prior art reference can be modified to provide the apparatus as claimed does not render the apparatus obvious. There must be a suggestion or motivation in the reference to make such a modification. MPEP § 2143.01, III. Therefore, the Examiner's hindsight analysis is clearly utilizing the knowledge regarding the spacer gleaned only from Applicant's disclosure, thereby rendering the hindsight analysis improper.

Further, under the Examiner's characterization of Shimek GB '328, the reference would still not provide the burner assembly as claimed. The Examiner characterizes Shimek GB '328 as teaching the line of adhesive being a spacer and the lower portions of the burner body not in contact with the bead being the functional equivalent of a burner body having edge portions separate from the spacer and spaced apart from the burner pan by the thickness of the adhesive. If this characterization is accepted, then the reference still does not teach or suggest a burner assembly as claimed with, *inter alia*, a burner body with a lower portion having edge portions separate from a spacer and spaced apart from the burner pan with the lower portion being supported apart from the burner pan by the spacer forming an interior gas distribution chamber between the burner pan and the burner body. The line of adhesive as disclosed in Shimek GB '328 simply does not prove a spacer that supports a burner body as claimed to define the interior gas distribution chamber in accordance with the claimed invention.

The other three references do not correct the deficiencies of Shimek GB '328. Rosiek teaches providing a plate-like member supported atop the plenum. Palau is silent regarding how the heating plates are mounted. Arribas is similarly silent regarding providing an adhesive with sufficient thickness to act as a spacer. The only teaching or suggestion of a burner assembly as claimed is provided by the present application. Accordingly, the combination of references still does not provide each and every element



of the burner assembly as recited in claim 55. Therefore, Applicants respectfully submit that claim 55 is patentable over the applied references and is in condition for allowance.

Claims 56, 58, 59, 61-63, 145, and 146 depend from claim 55. For the above reasons and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Claim 64 is directed to a burner assembly having a base, a spacer adjacent to the base, and a burner body with a lower portion of the burner body spaced apart from the base by the spacer to form an interior gas distribution chamber therebetween. Further, the lower portion of the burner body has a flat undersurface portion generally parallel to the base of the burner pan and the lower portion has a recessed underportion spaced apart from the burner pan's base and recessed from the burner body's flat undersurface portion. The recessed underportion defines a portion of the gas distribution chamber.

The applied references, taken alone or in combination, fail to teach or suggest of the use of a spacer in conjunction with a burner body having the flat undersurface portion and the recessed underportion as set forth in claim 64. The references are silent regarding such a configuration. The Examiner's rejections and associated analysis of the four references also fails to identify or discuss where or how the references teach the claimed features of the burner assembly, including the burner body with a lower portion that has a flat undersurface portion generally parallel to the base of the burner pan and a recessed underportion spaced apart from the burner pan's base and recessed from the burner body's flat undersurface portion. The only teaching or suggestion of the claimed burner assembly is provided in the present application.

Even if the references could be modified to provide the burner assembly as claimed, there is no teaching or suggestion in the references to make such a modification. Any modification of the references to provide the claimed burner assembly would only be apparent to one skilled in the art after fully understanding the present invention and

applying impermissible hindsight analysis, while using the present application as a blue print for such construction. The Examiner's analysis and reconstruction of the prior art references does in fact include knowledge gleaned only from Applicants' disclosure. None of the references teach or suggest, *inter alia*, supporting a burner body, which has a recessed undersurface portion, away from the base by a spacer so as to define an interior gas distribution chamber. Accordingly, the Examiner's use of hindsight analysis and construction is improper. Therefore, for the reasons discussed above and the features in the claim, Applicants respectfully submit that claim 64 is patentable over the applied references and is in condition for allowance.

Dependent claims 65-69 depend from claim 64. For the above reasons and the features of these claims, these dependent claims are also patentable over the applied references and are in condition for allowance.

Claim 70 is directed to a burner assembly having a burner body spaced apart from the base forming a sealed interior gas distribution chamber with first and second chamber portions. A first set of gas distribution apertures is in communication with the first chamber portion and is configured to provide a first flow rate of fuel gas to the contoured surface for ignition in a first flame characteristic. A second set of gas distribution apertures is in communication with the second chamber portion and is configured to provide a second flow rate of fuel to the contoured surface for ignition and a second flame characteristic different than the first flame characteristic. For the reasons discussed above, the four applied references do not teach or suggest each and every feature of claim 70. The Examiner's assertion that aspects of the burner assembly are necessarily present in the teachings of the prior art is not supported by the applied references, also discussed above. The combination of references as asserted by the Examiner would still not provide the claimed burner assembly. Any modification of the references to provide the burner assembly of claim 70 would only be apparent with the benefit of impermissible hindsight analysis. Therefore, claim 70 is allowable over the applied references and is in condition for allowance.

Claims 71 and 72 depend from claim 70. For the above reasons and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

For all of the reasons previously presented and discussed above, independent claim 73 is patentable over the cited references. Dependent claims 74, 75, 79, and 80 depend from claim 73. For the above reasons and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Claim 81 is directed to a burner assembly with a burner body having upper and lower portions. The lower portion has first and second chamber portions configured to allow the flow of fuel gas to move from the first chamber portion to the second chamber portion. The upper portion of the burner body has a contoured surface, a portion of which forms a simulated log support portion to removably support one or more separate simulated logs adjacent to the simulated coal members. The gas distribution apertures extend through the burner body from the lower portion to the contoured surface of the upper portion adjacent to the simulated coal members and adjacent to the simulated-log support member. The burner body is constructed of a material that glows at selected color variations in the simulated coal members when the fuel gas from the gas distribution apertures is ignited adjacent to the contoured surface.

Shimek GB '328 does not teach or suggest a burner assembly having a burner body with an upper portion having a contoured surface forming a plurality of simulated coal members and a portion forming a simulated-log-support portion that supports one or more simulated logs adjacent to the simulated coal members. In fact, Shimek GB '328 teaches the multi-function burner that can be used under a grate that holds the logs above the burner. The reference does not teach or suggest that the burner is constructed with a specific simulated-log-support portion as claimed. Shimek GB '328 further is silent with respect to providing a burner body constructed of a material that glows at selected color variations in the simulated coal members when the fuel gas is ignited adjacent to the

contoured surface as claimed. Rosiek and Palau do not correct the deficiencies of Shimek GB '328.

On page 2 of the Office Action, the Examiner agrees that Arribas does not provide a burner body having a substantially flat portion forming a simulated-log-support surface adjacent to simulated coal members. The only teaching of the claimed burner with such a configuration is provided by the present application. Even if the references could be combined, such combination would not teach or suggest each and every feature of the burner assembly as a whole as set forth in claim 81. Any modification to the teachings of other the references to provide the claimed invention would only be apparent upon fully understanding the present invention and applying impermissible hindsight analysis. Therefore, independent claim 81 is patentable over the applied references and is in condition for allowance.

Dependent claims 82-86 depend from claim 81. For the above reasons and the features in the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Regarding claim 87, at least for the reasons discussed above, none of the references, taken alone or in combination, teach or suggest a burner assembly with a burner body and at least one simulated log thereon as claimed. Even if the references could be combined, the resulting combination would still not teach or suggest the burner assembly of claim 87. The only teaching or suggestion of any modifications to achieve the claimed burner assembly is provided in the present invention. Therefore, Applicants respectfully submit that claim 87 is patentable over the applied references and is in condition for allowance.

Claims 88-92 depend from claim 87. For the above reasons and the features in the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Claim 94 is directed to a burner assembly for use in a gas fire place unit for burning a fuel gas from a gas source. The burner assembly has a base configured to be positioned within the gas fireplace unit. A non-metallic burner body has a lower portion with a recessed area, and the burner body is spaced apart from and sealably coupled to the base to form a recessed gas distribution chamber. The upper portion of the burner body has the contoured surface that forms simulated coal members and a simulated-log-support surface. The burner body's gas distribution apertures and recessed gas distribution chamber together are configured to direct the fuel gas to the contoured surface with at least first and second fuel flow rates for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. The contoured surface, the recessed gas distribution chamber and gas distribution apertures are configured together to create flames that move relative to the contoured surface of the burner body and simulate a natural wood-burning fire. A simulated log is supported by the simulated-log-support surface adjacent to the simulated coal members. The burner body also glows at selected color variations in the simulated coal members to simulate a burning and glowing coal ember bed in the base of a fire when the fuel gas is ignited adjacent to the contoured surface.

For the reasons previously presented and discussed above the only teaching of such a burner assembly for a gas fireplace unit is provided by the present application. The four applied references, taken alone or in combination, do not teach or suggest a burner assembly with each and every element of claim 94. The references also fail to provide any teach or suggestion of any modifications to achieve the claimed burner assembly. Therefore, claim 94 is patentable over the applied references and is in condition for allowance. Claims 95, 96 and 98 depend from claim 94. For the above reasons and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance. Further, dependent claim 96 includes a base that has a generally flat top surface and a separator is positioned between the top surface and the burner body to support the burner body away from the top surface. The references are

silent with respect to such a separator. The only teaching of such a separator is provided by the present application. Therefore, even if the four applied references could be properly combined, they still do not teach each and every feature of the burner assembly of claim 96. Therefore, this claim is patentable over the applied references and is in condition for allowance.

Claim 99 is directed to a burner assembly with a burner pan, a separator, and a burner body. The burner body is out of direct engagement with the burner pan with the lower portion of the burner body being supported apart from the burner pan by the separator forming a gas distribution chamber between the burner pan and the burner body. The plurality of gas distribution apertures and the gas distribution chamber are configured to direct a flow of the fuel gas from the gas distribution chamber to the contoured surface with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other for ignition adjacent to the simulated coal members. The burner body is constructed of a material that glows at selected color variations in the simulated coal members to simulate a burning and glowing coal ember bed in the base of a fire when the fuel gas is ignited adjacent to the contoured surface.

The only teaching of the burner assembly as claimed with such a configuration is provided by the present application. For the reasons discussed above, the four cited references, taken alone or in combination, do not teach or suggest each and every element of the claim. Shimek GB '328 does not teach or suggest a burner assembly as claimed. Shimek GB '328 teaches a multi-function burner that has a ceramic fiber top fixed to a base unit to provide a hollow manifold. The burner of Shimek GB '328 does not teach or suggest a burner assembly with the separator as claimed. Shimek GB '328 also does not teach or suggest the burner assembly with the gas distribution chamber and the gas distribution apertures configured to direct a flow of the fuel gas from the gas distribution chamber to the contoured surface with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second

flame characteristics different from each other for ignition adjacent to the simulated coal members. Shimek GB '328 teaches away from such a construction, and the three other cited references do not correct the deficiencies of the primary reference. The references fail to teach or suggest all of the modifications that would be needed to provide the claimed burner assembly. Accordingly, the cited references can not support a *prima facie* obviousness rejection. Therefore, claim 99 is patentable over the applied references and is in condition for allowance.

Claims 100-104 and 106-110 depend from claim 99. For the above reasons and the features of these claims, these dependent claims are also patentable over the applied references and are in condition for allowance.

Regarding claim 111, the claim is directed to a burner assembly with a base, a separator adjacent to the base, and a burner body having upper and lower portions wherein the lower portion of the burner body is spaced apart from the base by the separator with a gas distribution chamber therebetween and configured to receive a flow of fuel gas from the gas source. The lower portion of the burner body has a flat undersurface generally parallel to the base and the lower portion has a recessed under portion spaced apart from the base and recessed from the burner body's flat undersurface portion. The recessed under portion defines a portion of the gas distribution chamber. The upper portion of the burner body has a contoured surface forming simulated burning members and a plurality of gas distribution apertures extend through the burner body to the contoured upper surface.

For the reasons previously presented and discussed above, none of the applied references, taken alone or in combination, teach or suggest a burner assembly with such a configuration having a base, a separator adjacent to the base, and the burner body as claimed. None of the references teach or suggest a burner assembly having a burner body with a lower portion spaced apart from the base of a burner pan by the separator and wherein the lower portion of the burner body has the flat undersurface portion and a

recessed under portion spaced apart from the base and recessed from the burner body's flat undersurface portion. The references are simply silent with respect to such a configuration. The only teaching or suggestion of such a configuration is provided by the present application. Accordingly, even if the references could be properly combined, they still do not teach or suggest each and every feature of the burner assembly of claim 111. Therefore, the claim is patentable over the applied references and is in condition for allowance.

Dependent claims 112-118 depend from claim 111. For the above reasons and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Claim 119 is directed to a burner assembly with a burner body spaced apart from the base forming a gas distribution chamber therebetween, and the gas distribution chamber has first and second chamber portions in fluid communication with each other and positioned to receive the fuel gas therein. Gas flow distribution surfaces extend between the first and second chamber portions and are configured to direct at least a portion of the fuel gas from the first chamber portion to the second chamber portion. The burner body is configured to support the simulated log on the contoured surface. The claim has been amended to clarify that the plurality of gas distribution apertures are selectively shaped, sized, and configured with the first and second chamber portions to direct a flow of the fuel gas to selected different portions of the contoured surface of the upper portion of the burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second realistic flame characteristics different from each other.

For the reasons previously presented and discussed above, the four applied references, taken alone or in combination, can not be properly combined to form the basis of an obviousness rejection. Further, the applied references do not teach or suggest each and every feature of the burner assembly as set forth in claim 119 as claimed. Any



modification of the applied references to provide such a burner assembly would only be apparent to one skilled after understanding the present invention and applying impermissible hindsight analysis. Therefore, claim 119 is patentable over the applied references and is in condition for allowance.

Claims 120 and 121 depend from claim 119. For the reasons discussed above and the features of these claims, claims 120 and 121 are patentable over the applied references and are in condition for allowance.

Claim 122 is directed to a burner assembly having a burner body with a recessed gas distribution chamber having a first chamber portion space apart from a second chamber portion and interconnected therewith by an intermediate chamber portion smaller than the first and second chamber portions. The first chamber portion is positioned to receive a flow of fuel gas therein directly from the fuel gas inlet so the fuel gas is distributed from the first chamber portion through the intermediate chamber portion to the first chamber portion. The plurality of gas distribution apertures and the first and second chamber portions are configured to direct a flow of the fuel gas to the contoured surface of the upper portion of the burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. The burner body is constructed to provide flames that move relative to the simulated log in a manner that resembles a natural wood-burning fire when the fuel gas is ignited in the gas fireplace unit.

None of the four cited references, taken alone or in combination, teach or suggest a burner assembly as claimed with a burner body that has a recessed gas distribution chamber with a first chamber portion positioned to receive a flow of fuel gas therein directly from the fuel gas inlet so the fuel gas is distributed from the first chamber portion through an intermediate chamber portion to the second chamber portion. The references are also silent regarding a plurality of gas distribution apertures and the first and second chamber portions configured to direct a flow of the fuel gas from the fuel gas inlet, into the first

chamber portion, through the intermediate chamber portion, into the second chamber portion, and through the gas distribution apertures to the contoured surface of the upper portion of the burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. The only teaching or suggestion of such a configuration is provided by the present application. Accordingly, the four applied references do not teach or suggest each and every feature of the burner assembly as claimed, and the references can not support a *prima facie* obviousness rejection. Any modification of the applied references to provide such a burner assembly would only be apparent after understanding the present invention and applying impermissible hindsight analysis. Therefore, Applicants respectfully submit that claim 122 is patentable over the applied references and is in condition for allowance.

Claims 123-125 depend from claim 122. For the reasons set forth above and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

Claim 128 is directed to a burner assembly with, *inter alia*, a base, a burner body with a lower portion sealably coupled to the base to form a gas distribution chamber wherein the lower portion of the burner body has first and second chamber portions configured to allow the flow of fuel gas to move from the first chamber portion to the second chamber portion. The upper portion of the burner body has a contoured surface simulating coal members and a portion forms a simulated log support portion to support one or more simulated logs adjacent to the simulated coal members. The burner assembly includes a separator between the base and the burner body that separates the burner body from the base. For all of the reasons previously presented and discussed above, the four cited references, even if they could be combined, still do not teach or suggest each and every feature of the claim. Accordingly, the references can not support a *prima facie* obviousness rejection. Therefore, claim 128 is patentable over the applied references and is in condition for allowance.

Dependent claims 129 and 130 depend from claim 128. For the above reasons and the features in the claims, these claims are patentable over the applied references and are in condition for allowance.

Claim 131 is directed to a burner assembly for use with a gas fireplace unit and for burning a fuel gas from a gas source. The burner assembly has a burner body with upper and lower portions and a spacer between the lower portion of the burner body and the assembly's base. The upper portion of the burner body has a contoured surface forming simulated coal members, and the upper surface has a simulated-log support portion to support one or more logs adjacent to the simulated coal members. The lower portion of the burner body is sealably coupled to the base to form a gas distribution chamber having a first chamber portion and a second chamber portion configured to allow the flow of fuel gas to move from the first chamber portion to the second chamber portion. The plurality of gas distribution apertures and the first and second chamber portions are configured to direct a flow of the fuel gas to the contoured surface of the upper portion of the burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. The burner body is constructed of a material that glows at selected color variations in the simulated coal members when the fuel gas is ignited in the gas fireplace unit adjacent to the contoured surface.

As discussed above, none of the applied references, taken alone or in combination, disclose or teach a burner assembly with a base, a burner body with the lower portions as claimed, and a spacer assembly between the lower portion of the burner body and the base. The references do not teach or suggest the claimed upper portion of the burner body with the plurality of simulated coal members, and the portion forming the simulated log support portion to support one or more simulated logs adjacent to the simulated coal. The references also fail to teach or suggest the plurality of gas distribution apertures and the first and second chamber portions configured to direct a flow of the fuel gas to the contoured surface of the upper portion of the burner body with at least first and second

flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. Accordingly, for the reasons discussed above, the four applied references can not support a *prima facie* obviousness rejection. Therefore, claim 131 is patentable over the applied references and is in condition for allowance.

Claims 132-134 depend from claim 131. Applicants respectfully submit, for the above reasons and the features in the claims, that claims 132-134 are also patentable over the cited references and are in condition for allowance.

Claim 135 is directed to a burner assembly having a burner body with a lower portion that has a recessed gas distribution chamber integrally formed therein. The upper portion of the body has a simulated log thereon and a contoured surface having integral peaks and valleys resulting in a burner body having different thicknesses between the recessed gas distribution chamber and the contoured surface. The burner body has gas distribution apertures having a plurality of different heights. The gas distribution apertures and the gas distribution chamber are configured to direct a flow of the fuel gas to the contoured surface of the upper portion of the burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. The burner body is configured to distribute fuel gas to the upper portion and around the simulated log to provide a flame having color variations and movements that simulate a natural wood burning fire.

None of the applied references disclose, teach, or suggest a burner assembly with each of the features as recited in claim 135 at least for the reasons previously presented and discussed above. In addition, the references are silent with respect to a burner body as claimed having a recessed gas distribution chamber formed integrally therein and having different thicknesses between the recessed gas distribution chamber and a contoured surface. Such a configuration of the burner body with the different thicknesses

and the gas distribution apertures as set forth in the claim helps allow for fuel gas to be distributed to the upper portion and around the simulated log to provide the color variations and movements that simulate the natural wood burning fire. The references are also silent about gas distribution apertures and an integral recessed gas distribution chamber being configured to direct a flow of the fuel gas to a contoured surface of a burner body with at least first and second flow rates of fuel for ignition adjacent to the contoured surface to provide flames with at least first and second flame characteristics different from each other. Even if the applied references could be properly combined, the references taken alone or in combination fail to teach each and every feature as recited in claim 135. Any modification of the teaching of the applied references to provide the burner assembly of claim 135 would only be apparent after understanding the present invention and applying impermissible hindsight analysis. Therefore, claim 135 is patentable over the cited references and is in condition for allowance.

Claims 139-141 depend from claim 135. Applicants respectfully submit, for the above reasons and the features in the claims, that claims 139-141 are also patentable over the cited references and are in condition for allowance.

Claim 142 is directed to a burner assembly having a base, a separator adjacent to the base, and a burner body with a lower portion spaced apart from the base by the separator with a gas distribution chamber therebetween and configured to receive a flow of fuel gas from a gas source. The lower portion of the burner body of the claim has a flat undersurface portion generally parallel to the base. The lower portion has a recessed under portion spaced apart from the base and recessed from the burner body's flat undersurface portion. Further, the burner body of claim 142 has an upper portion with a contoured surface forming simulated burning members and a selected group of gas distribution apertures are concentrated relative to each other to provide a selected flame shape when the fuel gas flowing through the concentrated group of gas distribution apertures is ignited adjacent to the upper portion of the burner body. The burner body is constructed of a material that glows at selected color variations when the fuel gas is ignited

adjacent to the contoured surface. A simulated log is adjustably positioned on the burner body adjacent to the simulated burning members. At least for the reasons previously presented and discussed above, none of the applied references, taken alone or in combination, teach or suggest a burner assembly with each and every feature as set forth in claim 142. Even if the applied references could be properly combined, they do not teach each and every feature of the burner assembly of claim 142 with the base, the separator, and the burner body with the lower portion as set forth in the claim. Accordingly, the four references can not support a *prima facie* obviousness rejection of claim 142. Therefore, claim 142 is patentable over the applied references and is in condition for allowance.

Claims 143-146 depend from claim 142. For the reasons discussed above and the features of the claims, these dependent claims are patentable over the applied references and are in condition for allowance.

C. Rejection of Claims 60, 78, 93, 97, 126, 127 and 136-138 under 35 U.S.C. § 103

Claims 60, 78, 93, 97, 126, 127 and 136-138 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek and Palau and Arribas, and further in view of Shimek et. al or Whittaker. These rejected claims are directed to burner assemblies with, *inter alia*, combustion air holes extending through the burner body and being out of fluid communication with the gas distribution chamber. Applicants respectfully submit, for the reasons set for the above and the features in the claims, that these claims are patentable over the six applied references. Shimek GB '328, Rosiek, Palau, and Arribas, taken alone or in combination, do not teach or suggest the claimed burner assemblies as claimed for the reasons discussed above. Shimek et al or Whittaker do not correct the deficiencies of these references.

Further, Shimek GB '328 teaches the portable, multi-function burner/stove/grill that has the ceramic fiber top sealed to the base unit to provide the hollow manifold. Neither Rosiek, nor Palau, nor Arribas provides a teaching or suggestion of providing combustion

air holes in the ceramic top as claimed. Any modification of the references to provide a combustion air hole would only be apparent to one skilled in the art after understanding the present invention and applying impermissible hindsight analysis and by using the present application as a blue print for piecemeal construction of elements the prior art. The references also fail to provide the suggestion of motivation to combine the features of six references. Further, even if the six references could be combined, the resulting combination would still fail to teach or suggest each and every feature of the burner assembly as claimed. Accordingly, Applicants respectfully submit that the six cited references can not support *prima facie* case of obviousness. Therefore, the claims are patentable over the six applied references and are in condition for allowance.

D. Rejection of Claims 57, 76, 77, and 105 Under 35 U.S.C. § 103

Claims 57, 76, 77, and 105 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimek GB '328 in view of Rosiek and Palau and Arribas, and further in view of Smith. Smith is directed to apparatus for generating infrared radiation. The infrared generators of Smith generally have a felted fiber matrix pad through which a gaseous combustion mixture is passed to emerge from one surface and to burn at that surface to heat the surface to incandescence and thus generate infrared energy. Smith does not correct the deficiencies of the primary, secondary, tertiary and quaternary references. Further, the combination of the five references to support the obviousness rejection is based upon a piecemeal construction of features of five different patents using the present application as a blue print for such construction and with the benefit of impermissible hindsight analysis in an effort to provide a burner assembly as claimed in the present application. Applicants respectfully submit that, even if the references could be properly combined, the five applied references still do not teach or suggest a burner assembly with each and every element as recited in the claims. Such piecemeal construction of the prior art can not support a Section 103 rejection. Therefore, in view of all of the arguments set forth above, Applicants respectfully submit that claims 57, 76, 77, and 105 are patentable over the applied references and are in condition for allowance.

E. Conclusion

In view of the above amendment and remarks, the pending application, including all pending claims, is in condition for allowance. Applicants therefore request reconsideration of the application and an allowance of all pending claims. If the Examiner wishes to discuss the above amendments or any other issue, the Examiner is encouraged to call Robert G. Woolston at (206) 359-3259. Additionally, if the Examiner notices any informalities in the application, he is encouraged to contact Mr. Woolston to expediently correct any such informalities.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 243148001US3 from which the undersigned is authorized to draw.

Dated: 11/19/07

Respectfully submitted,

By 

Robert G. Woolston

Registration No.: 37,263

PERKINS COIE LLP

P.O. Box 1247

Seattle, Washington 98111-1247

(206) 359-8000

(206) 359-7198 (Fax)

Attorney for Applicant